WILLIAM CHAN
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EDUCATION

Master of Science, Computer Science **Expected May 2023**
Bachelor of Science, Computer Science and Mathematics **Expected May 2022**
GPA: 3.822; College of Science and Engineering, University Honors Program, University of Minnesota, Twin Cities

SKILLS

Python (Flask, Scikit-learn, HyperSpy, Dask, Matplotlib, NumPy, pandas, SQLAlchemy, Requests, Beautiful Soup); R (ggplot2); Tableau; C; C++; OCaml; Java; JavaScript (React); MATLAB; SQL; Selenium; Git

EXPERIENCE

Data Analytics Internship *June 2021 – August 2021*
Quality Controls Team, Technology & Operations Services, U.S. Bank
- Automated processes for loading datasets from a MySQL database and the Elasticsearch API to an internal database using **SQL** and **Java**, replacing 15 hours per month of manual processes across multiple teams.
- Integrated data from the Virtual Storage Intelligence API into an internal database using **SQL** and **Java**, enabling the creation and display of new metrics in an application resource utilization dashboard.

Data Analytics Internship *June 2020 – May 2021*
Quality Controls Team, Technology & Operations Services, U.S. Bank
- Automated processes for loading datasets from the VMware vROps API and text files into an internal database using **SQL**, **Python**, and **Java**, replacing 9 hours per month of manual processes.
- Identified essential factors to ensure compliance with federal audits by building dashboards using **Tableau**.

The Flannigan Research Group *August 2019 – June 2020*
Department of Chemical Engineering and Materials Science, University of Minnesota
- Analyzed electron microscope images with **HyperSpy**, **Dask**, and **Python** to study wave propagation in materials.

Summer of Topological Data Analysis Internship *June 2019 – August 2019*
711 Human Performance Wing, Air Force Research Laboratory, Wright Brothers Institute, OH 45402
- Developed unsupervised methods to classify roads, bodies of water, and buildings in aerial lidar data with an explainable artificial intelligence architecture based on topological data analysis in **Ayasdi** and **Python**.

Wright Scholar Internship *June 2018 – August 2018*
711 Human Performance Wing, Air Force Research Laboratory, Wright Patterson Air Force Base, OH 45433
- Automated exploratory analysis and visualization of metagenomic data of human gut microbiota to identify changes in phylogenetic diversity and biological pathways resulting from various stressors using **R**.
- Resolved networking and configuration issues with **FreeNAS** server used for sequence data storage.

Bioinformatics Internship *June 2017 – March 2018*
711 Human Performance Wing, Air Force Research Laboratory, Wright Patterson Air Force Base, OH 45433
- Analyzed the evolutionary relationship between obligate intracellular parasites and human hosts using **ggplot2** and **R**.
- Developed genomic distance extension written in **C++** with **Rcpp** for the statistical programming language **R**.
- Delivered analysis and graphical displays contained within **R** scripts and exported to **LaTeX** files.

PROJECTS

rheed-viz *October 2021*
Acceleration Consortium Hackathon 2021
- Built a web app for analyzing reflection high-energy electron diffraction (RHEED) image data using **Streamlit**, **Python**, and **PostgreSQL** through the Molar library in a team of four students.
- Awarded 1st place out of 10 teams.

Midwest Undergraduate Data Analytics Competition 2020 *April 2020*
- Built an XGBoost model in **R** to predict the outcome of civil rights cases in an intercollegiate data analytics competition, in a team of four students.
- Achieved 2nd highest prediction accuracy out of 34 teams and received an Honorable Mention.

neurolens *March 2020*
Hacktech 2020
- Built a web app that recommends medications based on a patient's treatment history using **Flask** and **Python**, in a team of four students.
- Awarded Best Social Good Hack, Best Artificial Intelligence & Computer Vision Hack, and Best Hack Using Machine Learning out of 73 submitted projects.

OTHER EXPERIENCE

CSCI 3081W - Program Design and Development Undergraduate Teaching Assistant *September 2021 – Present*
Honors General Chemistry Tutor *September 2019 – May 2021*
Treasurer, American Chemical Society, University of Minnesota Chapter *March 2019 – Present*

AWARDS

CSE Alumni Society Scholarship 2021 – 2022
Best Buy Industrial Affiliates Council Access Scholarship 2020 – 2021
National Merit Corporation Scholarship 2018 – 2019